

Minutes

Date: 30/01/2020

Location: Marine Lab, Aberdeen

Subject: FTRAG Ornithology Subgroup Meeting

Attendees: Aly McCluskie (AM; RSPB), Colin Barton (CB; NNG/ Cork Ecology), Emma Ahart (EA; Seagreen/ SSE), Erica Knott (EK; SNH), Francis Daunt (FD; UKCEH), Glen Tyler (GT; SNH), Jared Wilson (JaW; MSS), Jessica Wilson (JeW; MS-LOT), Mike Armitage (MA; Seagreen/ RPS), Murray Grant (MG; ICOL/ RHDHV), Nick Brockie (NB; Seagreen/ SSE), Polly Tarrant (PT; NNG/ EDF), Rebecca Bamlett (RB; MS-LOT/MPP), Sarah Arthur (SA; ICOL/ RRPL), Sophia Irvine (SI; MS-LOT), Stuart McCallum (SM; ICOL/ Natural Power), Sue OBrien (SO; JNCC), Tom Evans (TE; MSS).

ITEM	MINUTE
1.0	Introductions and Apologies (Chair)
JW	Apologies from Ewan Walker, Gayle Holland, Karen Taylor and Janelle Braithwaite. HiDef paper circulated on aerial survey strategy, detailing current survey area, methods and approach to coverage and survey progress to date
2.0	Previous meeting minutes/actions
	<p>Aerial Survey Methodology</p> <ul style="list-style-type: none"> • SNH had requested details on number of planes being used which was discussed during the meeting. • Seagreen confirmed that they would be continuing to survey a 12 km buffer around the site perimeter. • Population monitoring. It was recognised that monitoring of productivity at the relevant SPA colonies where it is not already being carried out could be important in the assessment of potential impacts on bird species <p>Minutes accepted</p>
3.0	Project updates
	Project updates provided by 3 projects with accompanying presentations (NB, PT, SA).
4.0	Monitoring proposal

Aerial Survey

- HiDef method report circulated in January 2020 to the FTRAG-O subgroup. Provides a useful summary of progress. Combined surveys commenced April 2019 across all wind farms plus buffers. 2 planes are used in the summer surveys and 3 in the winter surveys. In August a portion of the combined survey had to be re-flown (areas over Inch Cape and NnG) but as the data can be combined this is not expected to present any problem.
- 4 cameras are used per survey but only 2 cameras are processed (giving approx. 12.5% coverage of the surveyed area). The additional cameras provide back-up in case of failure and can be processed if there is a need to increase coverage (and hence power to detect change). A power analysis is needed to inform on whether additional coverage will be needed from the two additional cameras. Provisional analysis (end of 2020) will provide a better insight into amount of additional cover that may be needed.
- Survey times are targeted at times of day that excludes 1.5 hours from sunrise and sunset in summer and 1 hour in winter. The dawn and dusk period is excluded because the sun angle is too low for digital imagery and often the light levels are too low at this time of the day. Surveys are randomised with respect to state of tide, due to tide times moving daily, and thus any effects should be cancelled out.
- MA stated that some initial investigations and provisional analyses indicated that it was likely that the survey design would have a good chance of detecting a magnitude of change of 50% in the abundance of all key species and of 30% for more abundant species – guillemot and razorbill.
- There was discussion on whether overflight coverage will match with turbine layout (as in the Beatrice WF post-consent surveys), but as the layout for the projects is not yet known this cannot be confirmed at the current time. There would be potential to use the additional cameras to increase coverage and increase the number of turbines overflown if required.
- Discussion was had over the planned durations of the aerial surveys, NnG have committed to continuing through construction and into operation, Seagreen have committed to also continuing through construction and into operation during the breeding season. Inch Cape are uncertain as to whether they will be continuing the surveys after March 2020. JW asked what the survey area would look like if this was to happen.

Action: Developers to provide the FTRAG with a map of what the coverage of the aerial survey would look like if Inch Cape were to cease surveying their area after March 2020.

GPS Tracking

- FD reported on a draft proposal which is being prepared by CEH and RSPB for GPS tracking and colony monitoring at Isle of May, Fowlsheugh and St. Abb's. The main focus of the proposal is the individual-based approach, whereby the behaviour and distribution at sea (obtained from GPS loggers), energetics/condition and demography is estimated at the individual not population level, which is a more powerful approach for estimating effects of offshore wind farms on birds. This approach was instigated on the Isle of May in 2019, and will be expanded to include St Abbs Head and Fowlsheugh from 2020 onwards.
- A second aim of the proposal is to expand data on counts and productivity at St Abbs Head and Fowlsheugh, where monitoring effort has traditionally been undertaken at a substantially lower level than on the Isle of May. In the first instance, RSPB, funded by Seagreen, are currently digitising historical colony monitoring data these two colonies and there is more data than originally realised – 29 years of Fowlsheugh Kittiwake

data and 25 years, 6 years and 21 years of St.Abb's Kittiwake, Razorbill and Shag data respectively.

- EA reported that Seagreen have funded a drone to support seabird counts at Fowlsheugh in difficult to access areas.
- FD presented details of the seabird tagging and tracking work undertaken at the Isle of May last summer.
- In 2019 4 species – Kittiwake, Puffin, Razorbill and Guillemots were tagged with remote download GPS loggers.
 - 25 Kittiwake with tracks showing easterly movements, travelled between 30-50 km. Years 18/19 similar.
 - 25 Puffins showing less of a foraging range than Kittiwakes, travelled between 20-40 km which was similar to years 18/19
 - 24 Guillemots showing a restricted range 20-30 km but similar to years 18/19
 - 15 Razorbills showed inshore foraging (as per guillemot) similar to 18/19.
- The utilisation distributions from the different years of tracking at the Isle of May (2010-14 and 2018-19) show between-year variation in the areas used by each species.
- Puffins show a negative response to catching and tagging. A long-standing question is whether this is as a result of the capture or device itself. CEH compared puffins that were either fitted with loggers or colour rings and controls (not handled at all) to investigate this further. The approach taken in 2019 was different to that in 2018 in two main ways. First, birds were captured at burrows as opposed to in mistnets placed close to burrows. This was to ensure that the burrow was known for all study birds, and the condition of the chick monitored and supplementary feeding could then be instigated in all cases. This capture method also ensured that both members of the pair were not caught and devices deployed on them. It is important to aim to avoid this because if a bird is showing a negative effect of the device involving a reduction in chick provisioning, the mate will typically compensate by increasing its provisioning rate. Second, the work was focussed during mid to late chick-rearing, to minimise the chance of working at nests where chicks were small and more vulnerable to reduced provisioning rates. This change in protocol was prompted by work in the previous year (2018) where device effects were evident and there was resulting chick mortalities, in particular at nests where chicks were small; therefore a revised protocol was required and implemented for 2019.
- There was still a reduced feeding rate for those with loggers, colour ring birds also showed a reduced feeding rate when compared to the control birds which suggested at least some of the effect was a result of the handling rather than the device itself. However, mates of experimental birds compensated by increasing their feeding rate, resulting in no statistically significant difference in overall feeding rate to chicks between experimental and control pairs. Supplementary feeding was undertaken at all study nests to further ensure that chick condition would be safeguarded from device effects; there was no difference in condition of chicks in the two groups. There was one chick mortality but the chick was already in poor condition prior to the tagging and the mortality was likely the result of an underlying health condition.
- Kittiwakes showed less evidence of negative effect of the devices. There was some suggestion that tagged birds may experience slightly lower breeding success than non-tagged birds, and that their chicks were in marginally better condition, but neither effect approached statistical significance.

Action: Francis Daunt to provide report on the 2019 Isle of May tagging

Action: Francis Daunt to circulate proposal to FTRAG for comment, FTRAG to provide comments within two weeks of receipt of the proposal.

Gannet Colour Ringing to monitor survival rates at the Bass Rock and potential 'control' colonies

- Support could be provided for ongoing programmes of colour-ringing and re-sighting adult gannets (to estimate survival rates) on both the Bass Rock and Grassholm colonies. There is potential for GPS tracking especially at Bass Rock. Consideration has been given to whether there is potential for colour ringing to be undertaken at a third colony, to provide an additional control site. Options considered include:
 - Ailsa Craig – too few birds are considered to be accessible and they may be sensitive to disturbance.
 - Hermaness – not an option as limited number of individuals would be accessible for ringing.
 - Sule Skerry – ringing already occurs every 3 years (next visit planned for 2022) via the efforts of volunteers therefore there is the opportunity to build on the existing work. This island is flat which access to birds to ring very straight forward but does hamper re-sighting effort. Stays would also need to be sufficiently long to ensure a high re-sighting probability, which is important for robust estimation of survival. However, the island is remote and a boat has to stay at the island when work is being undertaken. Furthermore, visit every three years would mean that survival estimates were integrated over that length of time, when annual estimates would be preferable. There are potential issues with being able to access the island for the level of re-sighting effort that is likely to be required.
 - Logistics for Sule Skerry are such that it is unlikely that surveys could commence this year but it will be investigated further for 2021.
 - Logistics and H&S implications need to be considered due to the remote location of Sule Skerry. An air lift incident for a broken ankle has occurred previously.
 - However, it is similar to Bass Rock with good access for ringing, but re-sightings are difficult (although it was unclear whether dedicated re-sighting efforts would resolve this).
 - Some discussions were had on whether new technological solutions could assist, including PIT tags.
 - SO suggested contacting Stefan Garthe to find out whether he colour rings gannets at Helgoland gannet colony in Germany, what sort of demographic data is being collected there and to what extent wind farms might be influencing gannet demography at that colony. This might provide some useful context to help interpret changes in population size/growth rate/survival rate/productivity at Bass Rock in relation to offshore wind construction and other drivers.

Action: Developers to consider the potential to include a third colony in the gannet ringing study.

Collision/Avoidance Study

- A joint study has been proposed between NnG, IC and Seagreen 1, which would be located at NnG. Draft ITT prepared and circulated to Advisory Group. ITT to be updated further to Advisory Group comments and then issued.
- SNH recommended and it was agreed that an Expression of Interest Phase would be helpful to ensure that the all potential tenders could be reached. NnG investigating the possibility of doing this.
- **Action: Developers to give group a window as to when they will be required to comment on the scope of study.**

2020 and beyond

	<ul style="list-style-type: none"> • Question raised about looking at other drivers that may account for changes in species distribution (e.g. oceanographic modelling). It was noted that it is very hard to investigate all drivers of demographic changes and beyond the scope of the individual project PEMPs. • If it were possible sandeel/sprat distribution, especially O group sandeels would be the most useful data. Current sandeel surveys undertaken by the Marine lab are undertaken in November and not relevant to the proposed monitoring programme. A summer sandeel survey would be needed (every June) to evaluate sandeel change distribution and how this may be driving a change in Kittiwake and Auk distribution in the wider area. It was concluded that this is not something the developers should be responsible for, but might be something Marine Scotland Science were interested in pursuing. <p>Action: JW to enquire within MSS as to possibilities for additional sandeel surveys to complement the proposed monitoring in the Firth of Tay.</p>
5.0	ScotMer ornithology update
	Update provided on progress of ScotMER projects, including when deliverables likely.
6.0	Any other business
	None. Next meeting in Autumn 2020